1. (Currently amended) A method for transmitting information using ultra-wide band transmission, the method comprising: ~~allocating, for signal transmission, each of a plurality of frequency sub-bands; and~~ sending, using orthogonal frequency division multiplexing, an ultra-wide band transmission comprising the information ~~by transmitting a signal over each of the plurality of frequency sub-bands~~; and allowing variation of pulse repetition frequency by removing multiple frequencies from a frequency hopping sequence. ~~of at least one transmission parameter to facilitate trade-off between at least two of power consumption, energy collection, bit rate, performance, range, resistance to multiple access interference, and resistance to multipath interference and spectral flatness~~

2. (Currently amended) The method of claim 1, comprising allowing variation of pulse repetition frequency to facilitate trade-off between at least two of power consumption, energy collection, bit rate, performance, range, resistance to multiple access interference, and resistance to multipath interference and spectral flatness.

3. (Original) The method of claim 1, wherein sending an ultra-wide band transmission comprises sending a burst symbol cycle transmission.

4. (Currently amended) The method of claim 1, comprising maintaining an effective bit rate [sending a burst symbol cycle signal over each of the frequency sub-bands].

5. (Currently amended) The method of claim 1 comprising reaching a desired level of bit and rate and performance by maintaining a combination of reduction of bit rate, coding and spreading ~~4, wherein sending an ultra-wide band transmission comprises sending a burst symbol cycle transmission~~.

6. (Original) The method of claim 1, comprising allowing variation of at least one transmission parameter in order to adapt to varying application requirements.

7. (Original) The method of claim 6, comprising automatically varying at least one transmission parameter in order to adapt to at least one of varying application

requirements and environment requirements.

8. (Original) The method of claim 6, comprising using one or more algorithms to facilitate varying at least one transmission parameter in order to adapt to at least one of varying application requirements and environment requirements.

9. (Currently amended). The method of claim 1, wherein sending an ultra-wide band transmission comprises ~~using orthogonal frequency division multiplexing, and comprises~~ using at least one of cyclic prefix transmission, ~~zero padding,~~ and a combination of cyclic prefix transmission and zero padding.

10. (Original) The method of claim 1, comprising allowing variation in time spreading, while sending identical information multiple times in a single sub-band as well as in different sub-bands.

11. (Currently amended) A method for receiving information using ultra-wide band transmission, the method comprising: ~~allocating, for signal transmission, each of a plurality of frequency sub-bands; and~~ receiving, using orthogonal frequency division multiplexing, an ultra-wide band transmission comprising the information by receiving signals transmitted over each of the plurality of frequency sub-bands; and allowing variation of received pulsed repetition frequency being introduced by removing multiple frequencies from a frequency hopping sequence. ~~and allowing variation of at least one of one or more reception parameters to facilitate trade-off between at least two of power consumption, energy collection, bit rate, performance, range, resistance to multiple access interference, and resistance to multipath interference and spectral flatness~~.

12. (Currently amended) The method of claim 11, comprising allowing variation of received pulse repetition frequency to facilitate trade-off between at least two of power consumption, energy collection, bit rate, performance, range, resistance to multiple access interference, and resistance to multipath interference and spectral flatness.

13. (Original) The method of claim 12, comprising reducing power consumption by shutting off the receiver at least one of during off periods, during anticipated redundant symbols, and during anticipated noisy symbols.

14. (Original) The method of claim 11, comprising varying an ADC bit number based on variation in at least one of an application and environmental requirements.

15. (Original) The method of claim 11, wherein receiving an ultra-wide band transmission comprises receiving a burst symbol cycle transmission.

16. (Original) The method of claim 11, comprising receiving burst symbol cycle signals over each of the frequency sub-bands.

17. (Original) The method of claim 16, wherein receiving an ultra-wide band transmission comprises receiving a burst symbol cycle transmission.

18-23. (Deleted).

24. (Currently amended) The method of claim [21] 1, wherein pulse repetition frequency is varied according to at least one of a particular application and a particular environment.

25. (Currently amended) The method of claim [21] 1, comprising adaptively varying pulse repetition frequency according to at least one of varying application requirements and varying environmental requirements.

26. (Currently amended) The method of claim [21] 1, comprising adaptively varying pulse repetition frequency using one or more algorithms.

27. (Currently amended) The method of claim [21] 1, comprising adaptively varying pulse repetition frequency

28. (Currently amended) The method of claim [21] 1, comprising reducing pulse repetition frequency to increase filter selectivity.

29. (Currently amended) The method of claim [27] 1, wherein reducing pulse repetition frequency to increase notch filter selectivity allows a chip implementation of one or more filters.

30-31. (Deleted).

32. (Currently amended) The method of claim [31] 1, comprising varying pulse repetition frequency to reduce cross-band interference.

33. (Currently amended) The method of claim [21] 1, comprising reducing pulse repetition frequency to mitigate interference between two or more pico-nets that each use a different frequency hopping sequence.

34. (Deleted).

35. (Currently amended) The method of claim [34] 1, comprising reducing pulse repetition frequency by a factor of two by removing one out of every two consecutive frequencies.

36. (Currently amended) The method of claim [34] 1, comprising reducing pulse repetition frequency by a factor of three by removing one out of every three consecutive frequencies.

37. (Currently amended) The method of claim [21] 1, comprising using different frequency hopping sequences for each of multiple pico-nets.

38. (Currently amended) ~~A method for transmitting information using ultra-wide band transmission, the method comprising: allocating, for signal transmission, each of a~~

~~plurality of frequency sub-bands; and sending an ultra-wide band transmission comprising the information by transmitting a signal over each of the plurality of frequency sub-bands; and~~ The method according to claim 1 further comprising setting pulse repetition frequency to mitigate inter-symbol interference.

39. (Deleted).

40. (Currently amended) A system for communicating information using ultra-wide band transmission and reception, the system comprising: a transmitter for: sending an ultra-wide band transmission comprising the information by transmitting, using orthogonal frequency division multiplexing, a signal and allowing variation of pulse repetition frequency by removing multiple frequencies from a frequency hopping sequence; ~~over each of a plurality of frequency sub-bands~~ and a receiver for: receiving an ultra-wide band transmission comprising the information by orthogonal frequency division multiplexing receiving signals ~~transmitted over each of a plurality of frequency sub-bands; wherein the system allows for at least one of selection of and variation of at least one of one or more transmission parameters and one or more reception parameters to provide adaptive trade-off between at least two of power consumption, bit rate, performance, range, and resistance to multipath interference and spectral flatness~~.

41. (New) The system of claim 40, adapted to allow variation of pulse repetition frequency to facilitate trade-off between at least two of power consumption, energy collection, bit rate, performance, range, resistance to multiple access interference, and resistance to multipath interference and spectral flatness.